

CLAIMS

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

- 1 1. A method for e-business solution assembly for process brokering and
2 content aggregation in collaborative e-commerce comprising the steps of:
3 supplying business process definitions;
4 composing Adaptive Documents (ADOCs) for business collaboration
5 by specifying valid application states for aggregated content and business, an
6 ADOC linking content aggregated from various data sources to business
7 processes and people and enabling collaborative business process management
8 through orchestration of a variety of applications and user interactions in a
9 context of a business process; and
10 assembling an integrated user experience through sequencing of
11 ADOC views.
- 1 2. The method of claim 1, further comprising the step of formulating business
2 objects that are referenced from the ADOCs.
- 1 3. The method of claim 1, further comprising the steps of:
2 defining a set of messages; and
3 generating application adapters to communicate with back-end systems
4 using the set of messages to represent business data.
- 1 4. The method of claim 1, wherein the step of composing ADOCs comprises
2 the steps of:
3 specifying valid application states for aggregated content; and

4 specifying business rules for orchestrating state transitions.

1 5. The method of claim 1, wherein interactions with said ADOCs is through
2 programmatic means.

1 6. The method of claim 1, wherein interactions with said ADOCs is through
2 view-based human interactions.

1 7. A system for process brokering and content aggregation in collaborative
2 e-commerce comprising:

3 a single process brokering interface providing an interface for clients;

4 a plurality of Adaptive Documents (ADOCs) linking content
5 aggregated from various data sources to business processes and people, the
6 process brokering interface redirecting a business event from a client to an
7 appropriate ADOC;

8 an ADOC controller for each such ADOC acting on an event from a
9 client based on its state and content of the business event and business rules
10 attached to the ADOC by executing commands corresponding to work
11 specified in the ADOC in response to the business event and, if the execution
12 of a command is successful, changing a state of the ADOC; and

13 a plurality of workflow and business service related receivers
14 responsive to commands from the ADOC controller for executing a method on
15 a target object, a receiver being specified for each command, the receivers
16 providing an interface to service providers and mapping the service providers
17 to commands from the ADOC controller.

1 8. The system for process brokering and content aggregation in collaborative
2 e-commerce recited in claim 7, further comprising at least one activity

3 controller dynamically bound to an ADOC and based on an association of the
4 ADOC with activities in business processes defined in a workflow engine
5 serving as a receiver.

1 9. The system for process brokering and content aggregation in collaborative
2 e-commerce recited in claim 8, wherein the ADOC controller and the activity
3 controller are state machines.

1 10. The system for process brokering and content aggregation in collaborative
2 e-commerce recited in claim 7, further comprising a process scheduler
3 enabling time phased automatic invocation of service requests.

1 11. The system for process brokering and content aggregation in collaborative
2 e-commerce recited in claim 7, wherein the process brokering interface
3 comprises a process brokering service which allows clients to invoke dynamic
4 business services that are made available on a business state of the ADOC.

1 12. The system for process brokering and content aggregation in collaborative
2 e-commerce recited in claim 7, wherein the process brokering interface
3 comprises an ADOC query service which allows clients to query a business
4 state of the ADOC, ascertain available business services for a given business
5 state, access a business content aggregated by the ADOC, and query for
6 navigational purposes.

1 13. The system for process brokering and content aggregation in collaborative
2 e-commerce recited in claim 7, wherein the process brokering interface
3 comprises an ADOC lifecycle management service which allows clients to
4 create, delete, archive, and restore ADOCs.

1 14. The system for process brokering and content aggregation in collaborative
2 e-commerce recited in claim 7, wherein the process brokering interface
3 comprises a scheduling service which allows clients to automate service
4 invocation.

1 15. The system for process brokering and content aggregation in collaborative
2 e-commerce recited in claim 7, wherein one or more of the receivers are Web
3 service.

1 16. A method for designing a system for process brokering and content
2 aggregation in collaborative e-commerce comprising the steps of:
3 laying out an information model, an organization model, and a
4 business process model;
5 using the information model and the business process model to identify
6 Adaptive Documents (ADOCs) in the system, an ADOC linking content
7 aggregated from various data sources to business processes and people and
8 enabling collaborative business process management through orchestration of
9 a variety of applications and user interactions in a context of a business
10 process;
11 using business events and their prerequisites to design ADOC state
12 machines;
13 using processing rules associated with the business events to identify
14 commands that need to be executed as part of state transitions;
15 when processing rules dictate collaboration with user or software
16 agents in the system, using macro flows to define them, the macro flows being
17 directed graphs that establish relationships between activities that correspond
18 to nodes in these graphs; and

- 19 using activity controllers to define micro flow used to complete the
20 activities, a state machine modeling the behavior of the activity controllers and
21 commands effecting the behavior of the activity controllers.